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“Knowledge is such a treasure which cannot be stolen”

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Indian Standard
SPECIFICATION FOR
CARBARYL DUSTING POWDERS
(First Revision)

UDC 632.951 CARBARYL



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INDIAN STANDARDS INSTITUTION
MANAK BHAVAN, 9 BAHADUR SHAH ZAFAR MARG
NEW DELHI 110002

Indian Standard

SPECIFICATION FOR CARBARYL DUSTING POWDERS

(*First Revision*)

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Indian Standard

SPECIFICATION FOB CARBARYL DUSTING POWDERS *{First Revision}*

0. FOREWORD

0.1 This Indian Standard (First Revision) was adopted by the Indian Standards Institution on 30 November 1984, after the draft finalized by the Pest Control Sectional Committee had been approved by the Agricultural and Food Products Division Council and the Chemical Division Council.

0.2 Carbaryl dusting powder formulations are used in the control of insect pests of agricultural crops.

0.3 Carbaryl dusting powder formulations are generally manufactured to contain 5 or 10 percent (m/m) of carbaryl.

0.4 This standard was first published in 1973 and subsequently two amendments were issued. It is being revised to incorporate latest packing and marking clauses. Opportunity has been taken to give reference to the methods of analysis laid in IS : 6940-1982* for the sake of uniformity.

0.5 In the preparation of this standard due consideration has been given to the provisions of the *Insecticides Act*, 1968 and the Rules framed thereunder. However, this standard is subject to the restrictions imposed under these wherever applicable.

0.6 For the purpose of deciding whether a particular requirement of this standard is complied with, the final value, observed or calculated, expressing the result of a test or analysis, shall be rounded off in accordance with IS : 2-1960†. The number of significant places retained in the rounded off value should be the same as that of the specified value in this standard.

1. SCOPE

1.1 This standard prescribes the requirements and the methods of sampling and test for carbaryl dusting powders.

*Methods of test for pesticides and their formulations (first revision).

†Rules for rounding off numerical values (revised).

2. REQUIREMENTS

2.1 Description — The material shall be in the form of homogeneous powder. It shall be free-flowing and devoid of lumps. Carbaryl, technical used in its manufacture shall have been uniformly mixed in suitable fillers, such as talc or pyrophyllite. The material, when dusted from a hand rotary duster, shall issue freely without clogging or bridging.

2.1.1 Carbaryl, technical employed in the manufacture of dusting powder formulations shall conform to IS : 7539-1975*.

2.2 The material shall also comply with the requirements given in Table 1.

TABLE 1 REQUIREMENTS FOR CARBARYL DUSTING POWDERS

Sl. No.	CHARACTERISTIC	REQUIREMENT	METHOD OF TEST, REF TO	
			Appendix of Is : 7539-1975*	Cl No. of IS : 6940- 1982†
(1)	(2)	(3)	(4)	(5)
i)	Carbaryl content, percent by mass	Nominal value as declared on the container (see 2.3)	A	
ii)	Sieving requirement, material passing through 75-micron IS Sieve, percent by mass, Min (see Note)	90	—	12.1
iii)	Bulk density after compacting	Not to exceed the value obtained before compact- ing by more than 60 percent	—	12.2
iv)	Acidity (as H_2SO_4), percent by mass, Max	0'05	—	11.3
	OR			
	Alkalinity (as NaOH), percent by mass, Max	0'05	—	11.3

NOTE — IS : 460 (Part 1)-1978 † Specification for test sieves: Part 1 Wire cloth test sieves (**second revision**)'. BS Sieve 200, ASTM Sieve 200, Tyler Sieve 200 have apertures within the limits specified and may therefore, be used as 75-micron IS Sieve.

*Specification for carbaryl, technical.

†Methods of test for pesticides and their formulations (**first revision**).

*Specification for carbaryl, technical.

2.3 Carbaryl Content — When determined by the method prescribed in Appendix A of IS : 7539-1975*, the observed carbaryl content, percent by mass of any of the samples shall not differ from the declared nominal value by more than the percent tolerance as indicated below:

<i>Nominal Value, Percent</i>	<i>Tolerance Limit, Percent</i>
Up to 9	\$ 107 - 5
Above 9 and below 50	± 5 } of the nominal value
50 and above	+ 5 - 3

2.3.1 The actual value of the carbaryl content in the formulation shall be calculated to the second decimal place and then rounded off to first decimal place before applying the tolerances as stipulated in 2.3.

2.3.1.1 The average content of all samples taken shall not be lower than the declared nominal content.

3. PACKING AND MARKING

3.1 Packing The material shall be packed as per requirements given in IS : 8190 (Part 1)-1980†.

3.2 Marking — The containers shall bear legibly and indelibly the following information and any other additional information required under the *Insecticides Act* and Rules:

- Name of the material;
- Name of the manufacturer;
- Batch number ;
- Date of manufacture;
- Net mass of content;
- Nominal carbaryl content, percent (m/m), and
- A minimum cautionary notice as worded in the *Insecticides Act* and Rules.

*Specification for carbaryl, technical.

†Requirements for packing of pesticides: Part 1 Solid pesticides (*first revision*).

3.2.1 Each container may also be marked with the ISI Certification Mark.

NOTE -The use of the ISI Certification Mark is governed by the provisions of the Indian Standards Institution (Certification Marks) Act and the Rules and Regulations made thereunder. The ISI Mark on products covered by an Indian Standard conveys the assurance that they have been produced to comply with the requirements of that standard under a well-defined system of inspection, testing and quality control which is devised and supervised by ISI and operated by the producer. ISI marked products are also continuously checked by ISI for conformity to that standard as a further safeguard. Details of conditions under which a licence for the use of the ISI Certification Mark may be granted to manufacturers or processors, may be obtained from the Indian Standards Institution.

4. SAMPLING

4.1 Representative samples of the material shall be drawn as prescribed in IS :10627-1983*.

5. TESTS

5.1 Tests shall be carried out by the methods as specified in col4 and 5 of Table 1.

5.2 Quality of Reagents — Unless specified otherwise, pure chemicals and distilled water (see IS :1070-1977†) shall be employed in tests.

NOTE — 'Pure chemicals' shall mean chemicals that do not contain impurities which affect the results of analysis.

*Methods for sampling of pesticidal formulations.

†Specification for water for general laboratory use (*second revision*).

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INTERNATIONAL SYSTEM OF UNITS (SI UNITS)

Base Units

<i>Quantity</i>	<i>Unit</i>	<i>Symbol</i>
Length	metre	m
Mass	kilogram	kg
Time	second	s
Electric current	ampere	A
Thermodynamic temperature	kelvin	K
Luminous intensity	candela	cd
Amount of substance	mole	mol

Supplementary Units

<i>Quantity</i>	<i>Unit</i>	<i>Symbol</i>
Plane angle	radian	rad
Solid angle	steradian	sr

Derived Units

<i>Quantity</i>	<i>Unit</i>	<i>Symbol</i>	<i>Definition</i>
Force	newton	N	1 N = 1 kg.m/s ²
Energy	joule	J	1 J = 1 N.m
Power	watt	W	1 W = 1 J/s
Flux	weber	Wb	1 Wb = 1 V.s
Flux density	tesla	T	1 T = 1 Wb/m ²
Frequency	hertz	Hz	1 Hz = 1 c/s (s ⁻¹)
Electric conductance	siemens	s	1 S = 1 A/V
Electromotive force	volt	V	1 V = 1 W/A
Pressure, stress	pascal	Pa	1 Pa = 1 N/m ²

AMENDMENT NO. **1** MAY 1994
TO
IS 7122 : 1987 SPECIFICATION FOR CARBARYL
DUSTING POWDERS
(*First Revision*)

(*Page 6, clause 4.1*)— Substitute the following for the existing:

‘When freshly manufactured material in bulk quantity is offered for inspection, representative samples of the material shall be drawn and tested as prescribed in IS 10627 : 1983 within 90 days of its manufacture. When the material is offered for inspection after 90 days of its manufacture, sampling shall be ~~done~~ as prescribed in IS 10627 : 1983. However, the criteria for conformity of the material when tested, shall be the limits of tolerances, as applicable over the declared nominal value and given under clause 2.3 of the standard.’